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HEALTH AND NUTRITION SERVICE DELIVERY TO REFUGEES IN THE SOMALI DEMOCRATIC REPUBLIC, 1980

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1. INTRODUCTION

The following article summarizes some of the principal areas of activity of the authors who worked as INTERTECT nutrition and public health consultants to the Branch Office of the United Nations High Commissioner for Refugees (UNHCR) in Somalia between March and September, 1980. A third team member who assisted UNHCR as a logistics consultant participated in many of the activities, especially those related to the analysis and recommendations regarding the distribution of Basic Food Rations.

These activities draw on expertise developed by UNHCR and INTERTECT in Thailand, 1979-80, and on the pioneering work of other nutrition and public health specialists operating during previous natural and man-made disasters throughout the world.

For clarity, the work described here is divided into the three major operational objectives originally required by the consultant contract. It should be appreciated that for practical reasons the implementation of strategies designed to comply with each objective resulted in planning activities that were overlapping and complementary. It is anticipated that the strategies described in these three case histories will be of general application, with suitable geographical and cultural modifications, in future disaster situations where appropriate medium- and long-term planning in health and nutrition service delivery must be developed as soon as the initial emergency phase is passed.

2. THE ROLE OF UNHCR

As a non-operational UN agency, UNHCR has the dual role in refugee situations, upon the invitation of the host country, of coordinating the provision of assistance and protection for refugees. UNHCR does not of itself provide relief to refugees, but coordinates the appeal for assistance throughout the international community. Due to the manner in which UNHCR is established,

the agency coordinates technical expertise available from other UN and governmental agencies, private voluntary organizations (PVOs), and national institutions in the host country, as opposed to providing technical personnel directly.

Despite recent rapid developments in the state of the art, the provision of health and nutrition services to refugees and other disaster victims is still frequently reported in the literature to be deficient, or even chaotic. The causes, where they have been analysed, often prove to be based on severe deficiencies in medium- and long-range planning. Increasingly, UNHCR has recognized that its own health and nutrition planning capacity is limited by the non-technical nature of its staff. This recognition has developed to the point where UNHCR has utilized consultants to provide technical planning expertise to Branch Office staff in Thailand (1979-80) and Somalia (1980).

The authors feel that these initiatives are highly beneficial and long overdue. Within UNHCR itself, the need from this point onward remains to disseminate the application of the lessons learned among regional desks and national programmes, so that expertise and experience gained in either Thailand or Somalia may be of advantage in other existing and future refugee situations. It should be noted, however, that there are other agencies in the UN family which could also benefit from the rigorous application of these principles in their field operations.

As UNHCR gradually becomes more professionally competent in its approach to these technical issues, its coordinating role may be enhanced. It is hoped that this and other factors may have a positive effect on the increasingly common tendency towards interagency rivalry and uncoordinated individuality amongst some PVOs which diminishes the effectiveness and increases the cost of service delivery to refugees.

3. BACKGROUND TO HEALTH AND NUTRITION SERVICE DELIVERY TO SOMALI REFUGEES

The current movement of refugees into Somalia became significant in numbers in 1978, and grew slowly during 1979 to an official figure of approximately 400,000 at the end of that year. At the date of writing (September, 1980), that figure has doubled to just over 800,000 refugees in 26 camps in four distinct regions. Recently the influx tapered off to the region of 2,000 new refugees per week, and continues to decrease. For reasons beyond the scope of this article, the age- and sex- structure of the refugee population is biased towards women and children.

As in other man-made disaster situations, the refugees, ethnic Somalis and related groups from "Western Somalia" (Ethiopia), have been settled in temporary camps without access to their traditional economic activities. Previously about 60% had followed a principally nomadic, pastoralist way of life; the other 40% were mostly subsistence farmers, in addition to a few urban dwellers. In all cases, they were and continue to be almost wholly

dependent on the host Government of Somalia (GOS) for health and nutrition services.

Only a very small proportion of the refugees have significant resources in terms of animal herds or grain harvests which are still controlled by them or their family and clan members on either side of the border. In most cases, those resources have apparently been sold, destroyed by military action or drought, or surrendered to Ethiopian "expansion".

The GOS requested some international assistance late in 1978 to cope with the refugee situation, but it was not until October, 1979, that an emergency was declared which led UNHCR to mount a massive international appeal beginning in November. Under UNHCR coordination, and in collaboration with the GOS National Refugee Commission (NRC), combined health and nutrition services were quickly organized on an ad hoc basis.

Expatriate health personnel were provided in several camps by a few PVOs as early as late 1979. Health matters for refugees were initially administered by a health section within the Department of Social Services of the NRC. By April, 1980, there were about 25 expatriate volunteers and 100 salaried Somali health workers providing services to the refugees. The expatriates were brought in under Tri-Partite Agreements (individual contracts between UNHCR, the NRC representing the GOS, and each PVO) defining the responsibilities of each party and setting the number of workers and camps or areas to be covered. At this time, a Refugee Health Unit (RHU) was created within the NRC, with a Somali physician with refugee camp experience as its head, assisted by a handful of Somali health personnel seconded from the MOH. For the next four months, during which time the expatriate health worker presence had grown to about 75, and approximately 1,000 Community Health Workers were under-going training, there was ambivalence over whether the RHU should continue to be administered by the NRC. In August, 1980, the RHU established offices within the MOH, with additional Somali personnel and a long-term expatriate adviser. However, the government signatory to the Tri-Partite Agreements for PVO health workers remained as the NRC.

Medicines and medical equipment and supplies began to arrive with other non-food aid early in 1980 as a material response from the international community to the UNHCR appeal. Some of this aid arrived as unsolicited donations, and part was arranged under the Tri-Partite Agreements. In many cases, supplies went directly to the agency responsible for its donation, without passing into the general pool of refugee aid.

Since early 1980 the United States Agency for International Development (USAID), the European Economic Community (EEC), the World Food Programme of the Food and Agriculture Organization (WFP) and UNHCR have provided the bulk of

the food aid delivered to Somalia. WFP has coordinated the entire planning and delivery of food aid, in collaboration with UNHCR. The NRC receives most of this aid for Basic Food Rations on behalf of the GOS at the ports of Mogadishu and Berbera and releases it for national distribution by internal road transport to the regional and camp stores. The food for Supplementary and Intensive Feeding Programmes for vulnerable groups is handled on behalf of WFP by the Food Aid Department of the Ministry of National Planning and Local Government and similarly trucked to regional and camp stores.

The WFP Branch Office in Mogadishu has published a monthly food aid report since about April, 1980. Utilizing current and projected refugee population statistics issued by the NRC, the WFP report provides updated information on the annual food requirements and current pledges and deficits with which to approach international donors for new food pledges.

4. BASIC FOOD RATIONS

4.1 Justification

Deficiencies of quantity and quality in the provision of Basic Food Rations had been reported as early as April (1). These problems had been brought to the attention of WFP Headquarters in Rome by representatives of UNHCR Headquarters in Geneva in the same month. WFP responded by accelerating a number of its scheduled food deliveries to Somalia, and although this alleviated the situation to a certain extent, it soon became clear that this was far from a complete solution. It was evident that the quantity and quality of Basic Food Rations required much more detailled examination and more far-reaching strategies to improve this fundamental service to refugees.

During the 12-month period from July 1979 to June 1980, nearly 100,000 m.t. of food commodities were actually donated to and arrived in Somalia for refugee assistance. This represented some 85% of the theoretical requirements. Only in the case of the items procured locally, meat and sugar, were serious deficiencies experienced due to the lack of cash funds for their purchase. However, upon analysing feed-back from expatriate sources in the camps, it was unofficially estimated by the food agencies that no more than 50% of the imported foodstuffs actually reached the refugee beneficiaries for whom they were intended.

Of the eight commodities in the Food Basket designed early in 1980 by WFP, no more than four or five commodities were distributed during any month during the first three quarters of the year. The quantities delivered were small so that camp reserves of more than a few days supply never developed, and most distributions were arranged on an *ad hoc* basis directly off the trucks.

Often commodities were delivered singly, for long and irregular periods. It therefore proved impossible for the refugees to prepare an acceptable nutritious meal with more than two or three components, without resorting to the barter or sale of part of their rations in exchange for other commodities. Most often they cooked boiled rice with oil, fried maize-meal pancakes or wheat-flour "fry-bread".

For this reason, active markets for refugee food developed in the camps (often mis-interpreted by casual observers as evidence of food sufficiency in those camps, and in the local towns and villages (likewise mis-interpreted by casual observers as evidence of corruption and theft amongst camp officials). The refugees sought to eat their traditional diet from time to time, and purchased milk and meat (also some vegetables, spices and sugar) for more abundant oil and cereals. From June to August, mounting dissatisfaction with the Basic Rations took the form of a series of unrelated, spontaneous raids on Supplementary Food stores in several camps. Milk was the usual object of theft during these raids.

In the April assessment report (1), it was pointed out that even if the Food Basket were to be delivered regularly in its entirety, the refugee diet would still exhibit certain nutritional deficiencies, which were identified, in order of priority, as follows:

a) low iron content, possibly responsible for the high prevalence of anemia reported by medical teams in the camps;

b) low vitamin C content, although symptoms suggestive of scurvy were only reported in one camp;

c) low niacin content, although pellagra has not been reported.

The original Food Basket in use up to August 1980 is presented in Table 1. (See Table 3 for a complete analysis of the nutrient composition of the Food Basket.)

It was also noted that due to limited dietary diversity, the population relied in some cases on a single foodstuff to supply almost all of a specific nutrient. For example, almost all the vitamin C and calcium in the Food Basket was derived from DSM. If this product became scarce because of erratic distribution, serious deficiency symptoms would be expected in the population over the long-term. Further, the occasional absence of maize or sorghum from food deliveries meant that almost half the daily ration was missing. Since substitution with other cereals was not practised, the calorie intake of the refugees was seriously reduced during periods of cereal shortages. The overall calorie deficiency experienced by the refugees was constantly reported in the form of poor nutritional status, principally among the vulnerable group of young children (see section 6.3).

Table 1. Original Somali Refugee Food Basket (up to August, 1980).

Commodity	Ration (g.) per person per day
Maize/sorghum[1]	250
Rice	75
Flour[2]	75
Oil	40
DSM[3]	50
Sugar/dates[1]	40
Tea	3
Meat	20
Total	553

[1] interchangeable commodity groupings

[2] enriched wheat flour

[3] dried skimmed milk, enriched with vitamins A and D

4.2 Objectives

In order to commence the correction of the inadequacies in the provision of Basic Rations described above, the issues of quantity and quality were necessarily separated, although a completely integrated approach to analysis and planning was adopted from the outset.

4.2.1 It was recognised at an early stage that the reasons for the insufficiency in food deliveries to the camps, despite the apparent adequacy of arrivals at the ports, could be discovered in the complex system through which the commodities were handled between port and camp. This structure was very poorly understood by the majority of the agencies involved, including UNHCR, so that the first step required a detailled examination of the entire warehousing, trucking, financing and camp-level distribution system through which each refugee commodity moved within Somalia.

4.2.2 The elucidation of the system was hampered by lack of adequate and accessible records. An important objective for the food donor agencies (USAID, EEC, WFP, UNHCR) throughout these activities was to improve accountability. Auditors from the headquarters of both USAID and EEC had pressured their Branch Office staff with the prospect of a cut-off in supplies if they could not establish normal accounting for the commodities from origin to point of distribution.

4.2.3 At the camp level, the development of more adequately stocked food stores was identified as the most appropriate strategy to relieve the irregularity of food distributions and the unpredictability of commodity availability

to the refugees. Methods were also sought to make the distributions more equitable through the development of standard procedures for family food allocation by time interval and household size.

4.2.4 The alleviation of nutrient deficiencies in the Food Basket was dealt with apparately at the national level. It was recognised that the addition of certain commodities and/or the substitution of others, through the careful compromise of factors relating to availability, cost, acceptability and nutritional value, would result in the formation of a new, more adequate Food Basket.

4.3 Methodology

The INTERTECT team guided the UNHCR BO staff through a series of analytical steps leading to proposals for intervention in close collaboration with the appropriate GOS Ministries, the NRC, the food donor agencies, and the centrally-controlled state food agencies (ADC and ENC). Logistical information was collected during field visits to port facilities, shipping agents, the state food agencies' storage facilities in ports and regions, and camp stores, distribution points and feeding centres. Field reports and technical memoranda were given wide circulation amongst the agencies in order to facilitate discussion of the issues at all levels. Since it was recognized from the outset that final responsibility for the implementation of improvements in the provision of Basic Rations lie with GOS Ministries and the NRC, all efforts were directed at the fullest participation of appropriate officials in the formulation of corrective logistical strategies.

4.3.1 Food Quantity

Close examination of the food distribution mechanism revealed it to be a "co-mingled" system. Upon arrival in port warehouses and regional stores, the state food agencies did not handle commodities donated by the international community for the refugees any differently from other stocks commercially purchased from overseas or from national agricultural production. Food supplies were found to be distributed through a requisition system, without appropriate priorities, to the general public, hospitals, schools, the army and the refugees. Inland transport costs were found to be inadequately funded by UNHCR so that commodities were monetized to pay for truck maintenance and fuel, drivers' salaries and porterage. Unpaid stevedoring charges at Mogadishu port delayed distribution of almost 1,000 m.t. DSM for three months (some milk was declared unfit and destroyed), and the NRC's enormous unpaid haulage bills (over US$1 million) threatened to shut down the distribution system indefinitely. Other problems involving damage and loss due to multiple handling were uncovered. Losses due directly to theft were found to be of a minor nature in most areas.

It became clear by July that the solution to the observed logistical ineffectiveness would involve the separation of refugee food assistance from non-refugee supplies. The necessary agency representatives were brought together in a series of informal meetings in which alternative strategies for this reorganization were discussed, and at this point WFP took the lead by presenting the general consensus to the GOS in written form. In essence, it was proposed that all responsibility for Basic Ration distribution should pass, through a phased transition, to the NRC. The food donor agencies recognised that this would be the only mechanism through which adequate accountability for the provision of food to the camps could be assured.

In August, the GOS National Emergency Committee approved the proposal and the NRC initiated a series of planning steps to assess its preparedness to take over logistical responsibility for the entire Food Basket. The administrative and operational task involved gearing up this relatively new GOS institution to handle approximately 200,000 m.t. of food per year from the end of 1980. The most difficult obstacle was that of the staggering recurrent costs of this operation (estimated at over US$10 million per year). Monetized USAID Title I funds would help to cover some of these costs, but large donations of cash would have to be found for an extended period from international assistance sources. Second only to this was the problem of upgrading the food programme administration capacity of the NRC management. Various alternatives for the solution of both needs were discussed during on-going planning sessions at NRC before full responsibility for the reorganization was accepted.

New EEC trucks and other vehicles, maintenance facilities and mechanics pledged to the NRC earlier in the year arrived between August and October. By September, the NRC had developed its logistical capacity to the point where it took over the food distribution previously covered by one of the two state food agencies, in addition to handling all Supplementary Food and non-food aid.

At the camp level, food storage capacity was low due to the lack of stores of adequate size and quality. A construction programme organized by UNHCR was subject to at least six months' delay, so that interim solutions were initiated to cover the immediate construction of food stores. By September, almost all camps had more or less adequate food stores with 20 days' or more overall capacity.

4.3.2 Food Quality

The process of the modification of the Food Basket involved a series of food planning meetings attended by the representatives of the appropriate agencies. For this purpose, the INTERTECT nutritionist reported on the nutritional inadequacies of the existing rations, and presented an analysis of the cost and nutritional composition of a large variety of commodities currently

available from the major food donors and other foodstuffs available for procurement in Somalia and elsewhere in the region. In addition, technical data was presented regarding average recommended daily allowances for individual nutrients, and indigenous nutritional patterns amongst Somalis of different socio-economic groups.

A synthesis of these discussions was presented in the form of a proposal in which a balance was sought between the constraints of commodity availability, nutritional content, cost and acceptability. With modifications, consensus was reached on a revised Food Basket in August. WFP immediately adopted the new ration for food aid planning purposes.

The revised Food Basket is presented in Table 2, and a comparative analysis of the nutrient composition of the previous and revised Food Baskets is presented in Table 3.

Table 2. Revised Somali Refugee Food Basket (from August, 1980).

Commodity	Ration (g.) per person per day	Total requirement (m.t.) for 900,000 refugees[4] per year
maize/sorghum/rice[1]	300 (200/50/50)	98,800
flour[2]/CSM[1]	100 (75/25)	32,940
oil	40	13,176
DSM[3]	50	16,470
sugar	40	13,176
dates	10	3,294
tea	3	988
meat	10	3,294
beans	40	13,176
salt	2	659
Total	595	195,973

[1] interchangeable commodity groupings

[2] enriched wheat flour

[3] DSM enriched with vitamins A and D

[4] average projected population for July 1, 1980 to June 30, 1981

4.4 Preliminary Results

4.4.1 Deliveries of Basic Rations to camps are now more regular and efficiently organized, with improved record-keeping, than at any previous period during the current relief operation. However, the transfer of full responsibility for food distribution to the NRC is still incomplete, so that several administrative

Table 3. Comparative analysis of the Nutrient Composition of the Original and Revised Somali Refugee Food Baskets, 1980.

Nutrient	Original Food Basket	RDA[1] Goal	Revised Food Basket
energy (calories)	2,135	2,300	2,237
protein (g.)	58	40	70
vitamin A (I.U.)	4,410	2,500	4,590
thiamine (mg.)	1.8	1.0	2.2
niacin (mg.)	12	18	15
Vitamin C (mg.)	4	30	14
iron (mg.)	9	15	15
calcium (mg.)	725	600	1,033

[1]Recommended Daily Allowance, taken from (2)

aspects of the operation are as yet unresolved. At the time of writing, efforts were being made to obtain professional expatriate personnel to assist the NRC to fully establish its food programme management capacity for the long-term.

Food deliveries to the refugees were threatened by fuel rationing caused by the cut-off of Iraqi crude oil supplies from the beginning of the Iran-Iraq War in late September. However, UNHCR secured a commitment from the GOS to give the NRC priority status in the rationing system to permit the trucks to roll with minimal interruption.

4.4.2 Resistance on the part of the GOS to the formal registration of refugee families and to the general issue of ration cards through which to ensure equitable distribution by family size has not been overcome. It was generally assumed that the NRC regarded the issue of ration cards as a de facto census of the refugee population, and this was not perceived to comply with the best interests of Somalia as a whole.

4.4.3 The implementation of the modified Food Basket has been relatively trouble-free. At the time of writing, pledges of food assistance from the international community for the year July 1, 1980 to June 30, 1981, for cereals, milk, wheat flour, CSM, oil and beans are almost complete. Meat, sugar, salt and tea continue to remain largely unpledged since, for the most part, they require cash for local or regional procurement. It is notoriously difficult for WFP to obtain pledges of cash for the provision of food aid.

5. HEALTH PROGRAMMES

5.1 Justification

From the beginning of the Somali refugee influx, health workers in the camps had recognized several health conditions as being of major significance, although at first diagnoses were not confirmed nor were cases quantified statistically. The most common of these was malnutrition, including anaemia, expecially in young children. This was complicated by periodic epidemics of preventable childhood diseases, such as measles and whooping cough. Together with diarrhoea from unclean water supplies and poor standards of hygiene, these diseases most probably caused a high death rate among under-5s. Respiratory diseases, especially tuberculosis (TB) also seemed to be wide-spread. Most health workers estimated the active TB rate at about 5%, although some claimed higher, less realistic rates. Skin diseases were also highly prevalent. Bilharzia and malaria were known to be present, but at a low level.

Lack of clean water was a problem in all camps, and in the Northwest region refugees had to obtain meagre supplies by painstakingly digging holes in the dry beds of wet-season rivers. Latrines were a low priority, partly because health workers believed that the dry desert climate prevented indiscriminate defecation from posing a severe health threat, and because of the cultural difficulty of educating refugees in the public health desirability of their use.

Several problems were identified in organizing health service delivery for Somali refugees that are common to similar long-term disasters:

5.1.1 A lack of available, reliable information on the health status of the refugees for the purpose of planning. There was no uniform system for the regular collection of data, and clinic records were of inconsistent quality and kept in at least four languages. Few key personnel had the opportunity to visit camps in all the four regions to even visually compare the situation.

5.1.2 Conflicting service delivery philosophies of different PVOs. Recognizing the long-term nature of the problem, development-oriented PVOs only provided health care where they could involve the refugee community, and train Somalis, giving emphasis to preventive activities. Other agencies saw the situation only as a crisis, sending personnel on short-term contracts to provide emergency-style curative services in isolation.

5.1.3 Conflicting philosophies toward foreign aid within the government. Certain sectors responsible for dealing with offers of aid felt that it was in the best interests of the refugees to accept any and all assistance offered, including expatriate personnel, without regard to its appropriateness. Others wanted to screen such assistance before the signing of Tri-Partite Agreements, especially where personnel might be sent to perform work that Somalis could do, or where high technology solutions were to be installed that the GOS would be unable to maintain in the long run.

5.1.4 Conflict of service delivery for refugees versus the rest of the rural population. Some Somali officials felt it was inappropriate to provide a higher standard of health care within the refugee camps than was available to the rest of the population, both for internal political reasons and because this standard was unlikely to be maintained in the long term. The interest of the international community in the refugees will not be sustained indefinitely, and many PVOs will ultimately withdraw from the scene.

5.1.5 Lack of service standardisation. Medicines and medical equipment and supplies used in each camp were inconsistent. There were no basic treatments for common diseases due to the use of various medical approaches and philosophies. Some medicines were wasted due to inappropriate use by poorly trained or inexperienced personnel. The number and quality of health personnel and their distribution varied drastically. In some camps there were no permanent physicians; in others expatriate ones were frequently underutilized.

5.2 Objectives

To attack these problems, the MOH was encouraged to initiate medium- and long-term planning at the national level to meet the health needs of the refugee population. Intrinsic in this planning was an emphasis on preventive rather than curative health services. It was based on a philosophy of health care delivery by the RHU, through the basic structure of the Somali health service, assisted by expatriates where necessary, and with a new cadre of local health workers, the Community Health Worker (CHW), to be trained. Services would be consistent as far as possible with that available outside the camps, or would serve as model programmes that might later be extended to the national health services.

5.3 Methodology

The methodology utilized to comply with these objectives was to bring together key individuals from agencies interested in refugee health, and utilise their collective expertise to set minimum standards of health care delivery. It was assumed that through such standardization, the refugees would receive better health care, and it would become possible to evaluate the effects of the various health interventions at the field level. Key steps in this process included:

5.3.1 The MOH invited the Center for Disease Control (CDC) to send a team of epidemiologists to collect data on the health and nutritional status of the refugees. The first survey was carried out in May, 1980 (3), and longitudinal information was collected in subsequent surveys conducted over the next few months (4,5,6).

5.3.2 A refugee health plan was drawn up for the RHU with participation of individuals from MOH, World Health Organization (WHO), CDC and UNICEF in May. The result of several meetings, primarily at the initiation of WHO, this plan included recommendations for numbers of expatriate and local staff, established basic numbers of health centres and posts depending on the size of each camp, estimated medical equipment requirements for the rest of 1980, and established a plan for the refugee immunization programme. This rather ambitious mass immunization programme envisioned the protection of all refugee children against six common diseases: polio, diptheria, pertussis, tetanus, measles and TB. The programme was designed as far as possible to be consistent with WHO's Expanded Programme of Immunization for developing countries.

5.3.3 The MOH convened a three-day health seminar in June, at the suggestion of the CDC team, and with the active participation of the RHU, INTERTECT team members representing UNHCR, and UNICEF, and representation of Somali regional health personnel, PVO health teams, and other interested agencies. The seminar discussed and accepted with modifications proposals for mortality and morbidity data collection reports, standard guidelines for feeding programmes, standard treatment regimes for common diseases, and a basic drug list. These standards had been drafted primarily by the MOH, amended according to consensus, and were approved by the Minister of Health in July. They were then distributed in loose-leaf notebook form in Somali and English languages to all health workers.

5.3.4 Under the auspices of the MOH, UNICEF and WHO, with technical advice from the CDC team, the Post-Basic Health School, the INTERTECT team, and other sources, a training programme for CHWs was planned and implemented. It was envisioned that the CHWs, once trained, would initiate or amplify preventive health activities, such as health education classes, and provide a very basic level of curative services in all the camps. The selection and training of CHWs was commenced in the camps in August by tutors and students of the Somali Post-Basic Health School. The first round of training should be completed by February, 1981.

5.3.5 On the basis of the above plans and seminars, medicine and medical supply and equipment lists were quantified according to the available data on usage and probable disease rates, and the May RHU plan. UNHCR undertook to find suitable donors by the distribution of these lists to interested PVOs. The equipment list included cold chain equipment with which to make it possible to maintain an on-going immunization programme in the refugee camps.

5.3.6 The RHU was gradually strengthened through material support from UNHCR and other agencies, and moral and technical support from the MOH and expatriate advisors including the authors. Initially, this was on an informal basis as expertise was available from CDC, UNHCR, etc., but a long-term Senior Medical Advisor was assigned from Oxfam and arrived in September.

5.3.7 The RHU initiated the formulation of a formal work-plan and budget (for 1981), to assure support for its operation and delivery of services to refugees at an adequate level for at least one further year.

5.3.8 Gradually, water supply was improved in many camps. Various methods were used, including simple shallow and medium depth wells, solar pumps, and expensive diesel-pump and chemical purification systems.

5.3.9 Latrine building programmes were expanded, and some interest and understanding of the underlying health concepts began to develop among the refugees.

5.4 Preliminary Results

The initial results of the above efforts include some successes and some further problems:

5.4.1 There is now standardized collection of data on mortality and morbidity in all camps in only two languages, Somali and English. This information is recorded in specific books in each health centre, collected and reported on a one-page form monthly to the RHU. Routine disease surveillance has thus been established in a rudimentary form.

5.4.2 There is more useful information available on morbidity rates and frequency of disease in the camps, permitting more rational ordering and distribution of supplies and medicines from the Central Medical Store.

5.4.3 Most children have been immunized against the common disease of childhood. This should prevent epidemics and reduce under-5 mortality. Sufficient cold chain equipment has been pledged to make an on-going immunization programme viable. Several problems in the initial immunization rounds, such as poor technique on the part of student vaccinators, break-down of the cold chain, and erratic record-keeping, were analysed and are now mostly resolved.

5.4.4 Outstanding medicine and medical equipment needs for 1980 have been pledged, and a more even supply of this assistance to the camps is now possible.

5.4.5 Over 1,000 refugees have received at least a month's training as CHWs. The MOH has commited itself to continuing the programme as a pilot project for all of Somalia. Through this programme, PVOs have been sensitized to the importance of the involvement of indigenous paraprofessionals in health care activities.

5.4.6 The RHU is now a viable entity, better capable of making planning decisions regarding the utilization of existing human and material resources, and the matching of future needs with offers of assistance.

5.4.7 Some PVOs have improved their services to refugees to meet the minimum standards required by the RHU. The process of participating in planning sessions has helped to minimise the effects of philosophical differences between PVOs. Because of excessive work-loads, however, full implementation of standard procedures at the field level is still deficient in some areas. The frequent lack of coordination between RHU and NRC before the signing of Tri-Partite Agreements

with expatriate health teams continues to inhibit the RHU's administrative and supervisory role.

5.4.8 In order to partially overcome the lack of coordination of PVO health and nutrition activities, short orientation courses for in-coming field personnel are offered by the RHU. However, since the RHU has no formal administrative authority over the PVOs, not all PVOs have taken advantage of this essential opportunity.

6. Selective Feeding Programmes

6.1 Justification

It was reported in April (1) that Selective Feeding Programmes (SFPs) for vulnerable groups were poorly established or non-existent in Somali refugee camps. No more than a handful of camp medical teams had recognised the need for SFPs, and very few had given priority to the development of Feeding Centres. Where Feeding Centres did operate, they were small. The food was usually distributed to the mothers of malnourished children in the form of dry rations; the quantity and type of food varied between camps. However, little or no standardization of the criteria for enrollment or discharge of beneficiaries in SFPs had been established.

Early attempts at SFP planning at the national level had been undertaken by WFP with little participation by the MOH. This planning had taken the form of arbitrarily setting the overall percentage of SFP beneficiaries at 15% of the total refugee population. This figure was supposed to cover malnourished children, pregnant women and the elderly, but these categories were not medically defined, nor was the figure based on any objective statistical data.

From an early stage in the refugee relief operation, it had been correctly recognized that SFPs should fall within the sphere of the refugee health service. The provision of Supplementary Feeding Programmes for the protection of vulnerable population groups (moderately malnourished children, pregnant and lactating women, the severely sick and very elderly) is actually a preventive health service. The provision of Intensive Feeding Programmes for the rapid recuperation of severely malnourished children is largely a curative health operation. Both programmes are administered simultaneously by health personnel in most disaster situations, although they are theoretically and practically very dissimilar. In the Somali refugee camps, in the absence of any consistent surveillance mechanism with which to monitor the nutritional status of infants and children, the need for Intensive Feeding Programmes went unrecognised. As a result, almost all SFPs in existence before June were Supplementary Programmes, i.e. severely malnourished children were given no special therapeutic treatment, but simply received dry rations. Since dry rations are rarely reserved exclusively for the person to whom they are given, but are usually re-distributed throughout the family according to social rather than nutri-

tional priorities, then it is little wonder that mortality rates amongst severely malnourished children were probably unaffected by the early SFPs.

A ration scale for SFPs, making no distinction between Supplementary and Intensive Programme beneficiaries was set by WFP around the same time as the original Food Basket was established, to facilitate the planning of food assistance deliveries. The SFP ration scale is presented in Table 4.

Table 4. Selective Feeding Programme Ration Scale and Analysis of Nutrient Composition for Somali Refugees, 1980.

Commodity	Ration (g.) per person per day
CSM[1]	80
DWM[2] or DSM[3]	40
sugar	20
oil	15
Total[4]	155

Nutrient	Ration composition (based on DWM[2])
Energy (cal.)	719
Protein (g.)	26

[1] corn-soya-milk "porridge"

[2] dried whole milk

[3] dried skimmed milk, enriched with vitamins A and D

[4] additional small quantities of donated tinned meat and cheese and bulk dried fruit are distributed when in stock

6.2 Objectives

In keeping with the move towards improved organization at the national level to ensure the quality of health and nutrition services, the MOH was encouraged to introduce rigorous standardization into the implementation of SFPs in the refugee camps. This standardization would take the form of written guidelines for the planning and implementation of Supplementary and Intensive Feeding Programmes, to be distributed to all camp health workers.

It was assumed that the promotion of standardized operations by the RHU would provide the PVOs with the theoretical basis with which to complete the establishment of SFPs in all camps. Further, the application of standard guidelines would permit the improvement of the efficiency and coverage of SFPs, contributing to the alleviation of malnutrition and ultimately to a measurable improvement in the nutritional status of the refugee population as a whole. It was recognised, however, that any long-term improvements in nutritional status would depend on the reorganization of the provision of Basic Food Rations.

6.3 Methodology

The strategy involved in complying with the objectives regarding SFPs formed an integral part of the overall strategy for the enhancement of health services. Key steps in the process were as follows:

6.3.1 To provide a scientific basis for the analysis of the nutritional status of the refugee population, the CDC team undertook a series of regional sample surveys (see Section 5.3.1). The age- and sex- structure of the refugee population was determined. The base-line nutrition results of the first two surveys are summarised in Table 5.

Table 5. Nutritional Status of Refugee Infants and Children[1], by Region, May to June, 1980[2].

Region	Sample Size	Percent of Median[3]		
		80% (normal)	71-80% (moderate malnutrition)	70% (severe malnutrition)
Northwest	1,004	71.5%	22%	6.5%
Hiran	553	72%	24%	4%
Gedo	949	78%	19%	3%
Corioli	-	91%	9%	-

[1] 110 cm. in height (corresponding approximately to 0-5 years of age)

[2] Sources: (3,4)

[3] WHO/NCHS Weight-for-Height Reference Standards

The early surveys also confirmed that the malnutrition prevalent in the refugee camps was of the marasmic (non-oedematous) type reflecting overall dietary energy deficiency. The Kwashiorkor (oedematous) variety reflecting protein deficiency was not found to be a problem.

6.3.2 With the aid of this "hard data", a technical planning session was convened by the INTERSECT nutritionist with the participation of the CDC team and representatives of UNHCR and the RHU. Standard guidelines for Supplementary and Intensive Feeding Programmes were sketched out in draft form, including criteria for enrollment in and discharge from SFPs, Feeding Centre procedures, and periodic individual assessment and camp surveillance procedures, utilising currently accepted weight for height criteria to define moderate and severe malnutrition in infants and children. Women in the last trimester of pregnancy and the first year of lactation, TB cases, and other sick and elderly persons with special problems were also formally defined as SFP beneficiaries.

6.3.3 At the June health seminar (see Section 5.3.3), the draft underwent general discussion and a consensus was reached on a modified set of guidelines

for immediate implementation throughout the country. In July the Minister of Health incorporated the SFP guidelines into the refugee health service standards distributed in the form of a loose-leaf notebook in Somali and English languages to all health workers. The overall percentage of SFP beneficiaries was re-affirmed at 15% of the total refugee population, although at that time the prevalence of TB and the numbers of sick and elderly persons in need of supplementary feeding had not been adequately quantified. From the CDC demographic and nutritional data, it was calculated that 5% of the population were infants and children in moderate and severe states of malnutrition, and 5% were pregnant and lactating women as defined. It was roughly estimated that 2% of the population were TB patients not covered by other criteria, and 3% as sick and elderly. The TB prevalence rate was later confirmed to be correct (5).

6.3.4 Despite disadvantages of high cost and poor quality control, the Oxfam Feeding Kit No. 1 (OFK1) was found to be the most practical equipment with which to operate Supplementary Feeding Programmes. Those PVOs which established Intensive Feeding Programmes modified the OFK1s with additional equipment as they determined the need. The most notable deficiency in the OFK1 is the absence of an adequate infant measuring board with which to undertake individual assessment and camp surveillance.

Total equipment requirements were assessed on the basis of up to one OFK1 per Feeding Centre. By the time of writing almost all health teams had adequate quantities of OFK1s with which to operate their Feeding Centres, and enough were on order to cover projected needs into 1981. The CDC team ordered infant measuring boards from a local carpenter, and one was distributed to each camp.

6.3.5 The establishment of theoretical guidelines for SFPs cannot ensure compliance on the part of health workers, without adequate periodic supervision and support. Many of the PVOs exhibited a poor capacity for training indigenous personnel and for organizing the human and physical resources necessary to create new Feeding Centres, due to differing priorities related to the importance of nutrition services and to lack of experience in SFP administration. It was recognised at an early stage that frequent supervision and support would be essential to ensure adequate compliance with the guidelines, but due to the lack of sufficient personnel and funds the RHU did not possess that capacity at the national level.

The RHU resisted attempts by the INTERTECT nutritionist to design a regional plan for camp-level SFP supervision utilising expatriate nutrition workers whose services had been offered to the RHU by several PVOs. In an unfortunate example of poor decision-making, the RHU determined that such regional nutrition workers represented an excessive expatriate influence, despite the fact that expatriate Regional Refugee Medical Advisors were operating with RHU approval

in three regions by August, 1980. The RHU argued that the Somali Regional Refugee Medical Officers could cover the responsibility for nutrition services, although those medical officers often displayed disinterest in preventive health and nutrition services. However, due to the uncoordinated mechanism for the acceptance of offers of assistance (see Section 5.4.7), the NRC had approved the introduction of regional nutrition workers in three out of four regions by August. Nevertheless, the RHU refused to acknowledge the invaluable role that those workers have performed.

The RHU also maintained that full responsibility for the operation of SFPs in all refugee camps should pass to the CHWs upon completion of their training early in 1981. In the opinion of most experienced public health workers in Somalia, the CHWs, many of whom are illiterate, willnnot have the administrative or practical capacity until some time after the completion of their training, if ever.

6.4 Preliminary Results

6.4.1 The provision of SFPs of much improved quality and coverage has now been achieved. Efficient Feeding Centres which provide wet rations for on-the-spot feeding twice a day to infants and children are operating in the majority of refugee camps. There are still, however, a number of inconsistencies in service delivery that will require continued orientation, training and supervision from the RHU and the regional nutrition workers. Of particular concern is the case of Corioli Region (three camps) where there is no regional nutrition support and the SFPs consisted, at the time of writing, of a dry ration distribution twice per month in association with the Maternal and Child Health Clinics. The RHU continued to refuse to accept expatriate assistance to improve the situation.

6.4.2 The September CDC nutrition survey (6) has shown that rates of malnutrition amongst infants and children have declined in all camps (not including transit camps) except one in the Northwest Region. In some cases the reduction in moderate and severe rates has been dramatic. It is proposed by the authors that although improved camp water supply between May and September has probably caused a reduction in diarrhoeal disease and hence a reduction in malnutrition rates, the major factor involved has undoubtedly been the highly successful provision of improved SFPs in most camps. There is little evidence to suggest that changes in the provision of Basic Food Rations, environmental sanitation or mass immunization had any significant effect on nutritional status.

6.4.3 WFP obtained food aid pledges to fully cover SFPs (7,638 m.t. for 15% of the projected average population of 900,000 refugees for the year July 1, 1980, to June 30, 1981) by September, 1980.

7. CONCLUSION

The improvements that have been achieved in health and nutritional status have depended on many levels of activity, from Ministers to Feeding Centre auxiliaries. Many refinements may prove necessary, but in essence a viable system has finally been established for the delivery of health and nutrition services to refugees.

The Somali refugee relief operation was slow in coming to the attention of the international community so soon after the well-publicised assistance programmes in Southern Asia. Campaigns for assistance for Thailand and Pakistan distracted the international community from Somalia's urgent needs, for all practical purposes, until March or April, 1980.

The underlying cause of the Somali refugees' plight, the war with Ethiopia, does not engender sympathy, either in Africa itself or amongst the principal international aid donors. Somalia's belligerent stance, albeit justifiable, is not deemed appropriate while the country is without significant resources with which to provide basic services to its population, much less fight a modern war against considerable odds.

The risk in this case is that international assistance may dry up whilst the numbers of refugees continue to increase. New disasters like the Algerian earthquake may divert human and financial resources away from Somalia. Legislators may find it increasingly difficult to justify aid to Somalia whilst the GOS remains firm in its political commitment.

Of particular concern to the authors is the risk to health and nutrition service delivery in the camps. The refugees are now and will continue to be heavily dependent on the international community for enormous quantities of food commodities, medical supplies and equipment, and other non-food aid in cash and in kind. It is essential, therefore, that alternatives for a durable solution to refugee settlement be analysed and implemented as soon as possible, in order to reduce the potential suffering that may occur if the present situation remains without a political solution for much longer.

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